



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D3167-1
Job Sheet 172134



Part No: D3167-1

Job Qty: 8 ea

Part Name: Bearpaw



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 2/13/18

Job Tracking No:

Due Date: 2/16/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG REV A1

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	8 Ea		2/15/18	0.00	0.00	Start Up Waterjet		SC 18/02/14
120	Waterjet	8 pcs		2/15/18	0.00	2.71	Waterjet1		DAG 18/02/14
130	CNC Vertical Machining	8 pcs		2/16/18	0.66	13.11	HAAS1-3		52 18/03/05
140	QC	8 pcs		2/16/18	0.00	0.00	QC2 Machining-1		489 18/03/05
150	QC	8 pcs		2/16/18	0.00	0.00	QC8 Machining-1		SC 18-03-05
151	Packaging	8 pcs		2/16/18	0.00	0.00	Packaging3		MAR 06 2018
190	QC21-SA	8 Ea		2/16/18	0.00	0.00	QC21		

Part Op 120 - Cut Blank as per File D3167-1_BLANK

Descriptions: 130 - Note: (2) Bearpaw for (1) Kit 2-Machine as per Folio FA285 and Dwg D3167

DAG 21 0-50
MAR 06 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
MUHMWB10	UHMW 1" Black - 48"x120" Tivar Mfg.#52480104	28.8000 sf (3.6 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	MUHMWB10	29	670	0

M178393-213

30

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Bearpaw	0.060inches + 0.030 - 0.010	0.090 0.050		
2	Bearpaw	45.000Degrees ± 0.500	45.500 44.500		
3	Bearpaw	5.800inches ± 0.030	5.830 5.770		
4	Bearpaw	0.250inches ± 0.030	0.280 0.220		
5	Bearpaw	45.000Degrees ± 0.500	45.500 44.500		
6	Bearpaw	0.250inches ± 0.030	0.280 0.220	Radius	
7	Bearpaw	0.200inches ± 0.030	0.230		

QA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____ Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION		AGAINST DEPARTMENT/PROCESS							
	Rework	☐	Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐
	Scrap	☐	Machining	☐	Small Fab	☐	Prod. Eng. Coord.	☐	Quality	☐
	Use-as-is	☐	Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
	Suspected Unapproved	☐	Large Fab	☐	Composite	☐	Supplier	☐		

Date: _____	Step #: _____	QTY Effective: _____	MRB (QSI042) Approval
-------------	---------------	----------------------	-----------------------

Description Work Order Deviation	Disposition
----------------------------------	-------------



visor
tion

itor

g
ions
erance
g

Dart Aerospace Ltd.
1270 Aberdeen Street
Newcastle, ON K6A 1K7
CANADA
TEL: 1 813 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 02/14/18 15:38 PM

Part: D3167-1

Serial No/Batch: S042458

Revision: D3167

Inspector: _____

Container No: S042458



Root Cause			
Environment	☐	No Re-verification	☐
Design	☐	Operator	☐
Doc/Data	☐	Offset/Setup	☐
Equip/Tooling	☐	Supplier	☐
Handling/Pre	☐	Training	☐
Material	☐	Use for Testing	☐
Internal Transport	☐	Poor Information	☐
Tribal Knowledge	☐	Rushing	☐
LOA	☐	Product Improvement	☐
Substation	☐	Process Improvement	☐
Past Expiry Date	☐	Manufacturing Process	☐
Misidentified	☐	Past Due	☐
OTHER : _____			

Pressure/Forced	☐	Cut Too Short	☐	Mislabeled	☐	Drawing	☐
Bending	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Finish	☐
Centre Not Concentr	☐	Drill Holes	☐	Misaligned/off center	☐	Misread	☐
Cracks	☐					Turning Sequence	☐
Crimp/Kink/Ripple/W	☐						
Cuffs	☐						
Crushing	☐						
Heat Treat	☐						
Wave/Twist in Tube	☐						
Marks/Chatter	☐						

			0.170	
8	Bearpaw	0.250inches $\pm$ 0.010	0.260 0.240	
9	Bearpaw	0.625inches $\pm$ 0.030	0.655 0.595	
10	Bearpaw	0.375inches $\pm$ 0.010	0.385 0.365	
11	Bearpaw	0.950inches $\pm$ 0.030 - 0.010	0.980 0.940	
12	Bearpaw	3.210inches $\pm$ 0.030	3.240 3.180	
13	Bearpaw	19.000inches $\pm$ 0.030	19.030 18.970	
14	Bearpaw	0.260inches $\pm$ 0.005	0.265 0.255	<i>-.260</i> Diameter
15	Bearpaw	0.930inches $\pm$ 0.030	0.960 0.900	<i>-.930</i> Diameter
16	Bearpaw	0.300inches $\pm$ 0.030 - 0.000	0.330 0.300	<i>-.312</i>
17	Bearpaw	0.375inches $\pm$ 0.030	0.405 0.345	
18	Bearpaw	7.230inches $\pm$ 0.030	7.260 7.200	
19	Bearpaw	4.540inches $\pm$ 0.010	4.550 4.530	
20	Bearpaw	2.000inches $\pm$ 0.030	2.030 1.970	
21	Bearpaw	12.000inches $\pm$ 0.010	12.010 11.990	
22	Bearpaw	6.000inches $\pm$ 0.010	6.010 5.990	
23	Bearpaw	23.750inches $\pm$ 0.030	23.780 23.720	

Plex 2/13/18 9:47 AM Dart.lajeunesse.marie

QA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____ Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Date : _____	Step #: _____	QTY Effective : _____	MRB (QSI042) Approval
Description Work Order Deviation		Disposition	
		Completed By	
		Lead hand / Supervisor Approval Verification	
		QC / QA Coordinator Approval	

Root Cause	FAULT CATEGORY																																																																
<table style="width:100%;"> <tr> <td>Environment ☐</td> <td>No Re-verification ☐</td> </tr> <tr> <td>Design ☐</td> <td>Operator ☐</td> </tr> <tr> <td>Doc/Data ☐</td> <td>Offset/Setup ☐</td> </tr> <tr> <td>Equip/Tooling ☐</td> <td>Supplier ☐</td> </tr> <tr> <td>Handling/Pre ☐</td> <td>Training ☐</td> </tr> <tr> <td>Material ☐</td> <td>Use for Testing ☐</td> </tr> <tr> <td>Internal Transport ☐</td> <td>Poor Information ☐</td> </tr> <tr> <td>Tribal Knowledge ☐</td> <td>Rushing ☐</td> </tr> <tr> <td>LOA ☐</td> <td>Product Improvement ☐</td> </tr> <tr> <td>Substation ☐</td> <td>Process Improvement ☐</td> </tr> <tr> <td>Past Expiry Date ☐</td> <td>Manufacturing Process ☐</td> </tr> <tr> <td>Misidentified ☐</td> <td>Past Due ☐</td> </tr> </table>	Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	<table style="width:100%;"> <tr> <td>Pressure/Forced ☐</td> <td>Temperature/Cure ☐</td> <td>Power Loss/Surge ☐</td> <td>Positioned Wrong ☐</td> </tr> <tr> <td>Bending ☐</td> <td>Set-up ☐</td> <td>Folio/Program ☐</td> <td>Outside Dimensions ☐</td> </tr> <tr> <td>Centre Not Concentric ☐</td> <td>BOM/Route ☐</td> <td>Grain ☐</td> <td>Over/Under tolerance ☐</td> </tr> <tr> <td>Cracks ☐</td> <td>Broken/Damage/Defect ☐</td> <td>Weld ☐</td> <td>Part Incorrect ☐</td> </tr> <tr> <td>Crimp/Kink/Ripple/Wave ☐</td> <td>Inspection Incomplete/Unqualified ☐</td> <td>Wrong Stock Pulled ☐</td> <td>Part Lost/Missing ☐</td> </tr> <tr> <td>Cuffs ☐</td> <td>Contamination ☐</td> <td>Out of Sequence ☐</td> <td>Part Moved ☐</td> </tr> <tr> <td>Crushing ☐</td> <td>Countersink ☐</td> <td>Off-set ☐</td> <td>Drawing ☐</td> </tr> <tr> <td>Heat Treat ☐</td> <td>Cut Too Short ☐</td> <td>Mislabeled ☐</td> <td>Finish ☐</td> </tr> <tr> <td>Wave/Twist in Tube ☐</td> <td>Instructions Incomplete/Unclear ☐</td> <td>Fit/Function ☐</td> <td>Misread ☐</td> </tr> <tr> <td>Marks/Chatter ☐</td> <td>Drill Holes ☐</td> <td>Misaligned/off center ☐</td> <td>Turning Sequence ☐</td> </tr> </table>	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Environment ☐	No Re-verification ☐																																																																
Design ☐	Operator ☐																																																																
Doc/Data ☐	Offset/Setup ☐																																																																
Equip/Tooling ☐	Supplier ☐																																																																
Handling/Pre ☐	Training ☐																																																																
Material ☐	Use for Testing ☐																																																																
Internal Transport ☐	Poor Information ☐																																																																
Tribal Knowledge ☐	Rushing ☐																																																																
LOA ☐	Product Improvement ☐																																																																
Substation ☐	Process Improvement ☐																																																																
Past Expiry Date ☐	Manufacturing Process ☐																																																																
Misidentified ☐	Past Due ☐																																																																
Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																														
Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																														
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																														
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																														
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																														
Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																														
Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																																																														
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																														
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																														
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																														
OTHER : _____																																																																	

DART AEROSPACE LTD		Work Order:	172134
Description: Bearpaw		Part Number:	D3167-1
Inspection Dwg: D3167	Rev: A1	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	0.06 x 45°	+0.030/-0.010	.06x45°				
B	5.80	+/-0.030	5.8				
C	0.25 x 45°	+/-0.030	.250x45°				
D	R0.25	+/-0.030	0.25				
E	0.200	+/-0.030	.200				
F	0.250	+/-0.010	.255				
G	0.625	+/-0.030	.630				
H	0.375	+/-0.010	.380				
I	0.950	+0.030/-0.010	.955				
J	3.21	+/-0.030	3.200				
K	19.00	+/-0.030	19.000				
L	Ø0.260	+0.005/-0.000	.260				
M	Ø0.93	+/-0.030	.930				
N	0.30	+0.030/-0.000	.312				
O	0.375	+/-0.030	.375				
P	7.23	+/-0.030	7.230				
Q	4.54	+/-0.010	4.54				
R	2.00	+/-0.030	2.00				
S	12.000	+/-0.010	12.000				
T	6.000	+/-0.010	6.000				
U	23.75	+/-0.030	23.75				

Measured by:	DAS 52	Audited by:	B.A	Prototype Approval:	N/A
Date:	18/03/05	Date:	18-03-05	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	03.09.22	New Issue P/O D130-700-011	KJ/RF	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

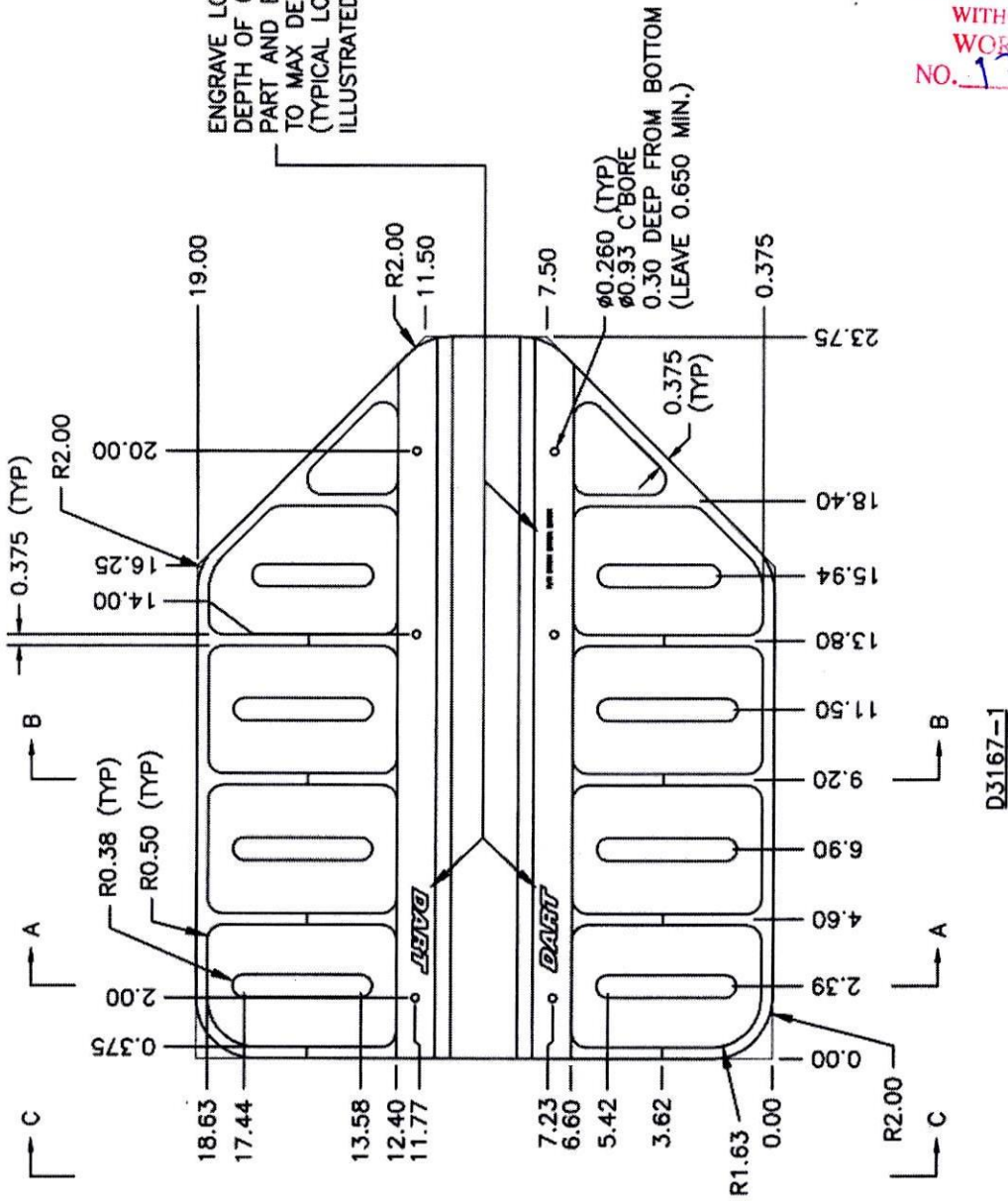


DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D3167	REV. A SHEET 1 OF 2
DATE 02.10.08		TITLE BEARPAW	SCALE 1:6
A	02.10.08	NEW ISSUE	
AI	02.12.17	5.80 WAS 5.50	

RELEASED
02.10.25

ENGRAVE LOGO TO MAX
DEPTH OF 0.012. ENGRAVE
PART AND BATCH NUMBERS
TO MAX DEPTH OF 0.010.
(TYPICAL LOCATION AS
ILLUSTRATED)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 172134
180213



MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689
1.00 THICK (MACHINE TO 0.950)
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

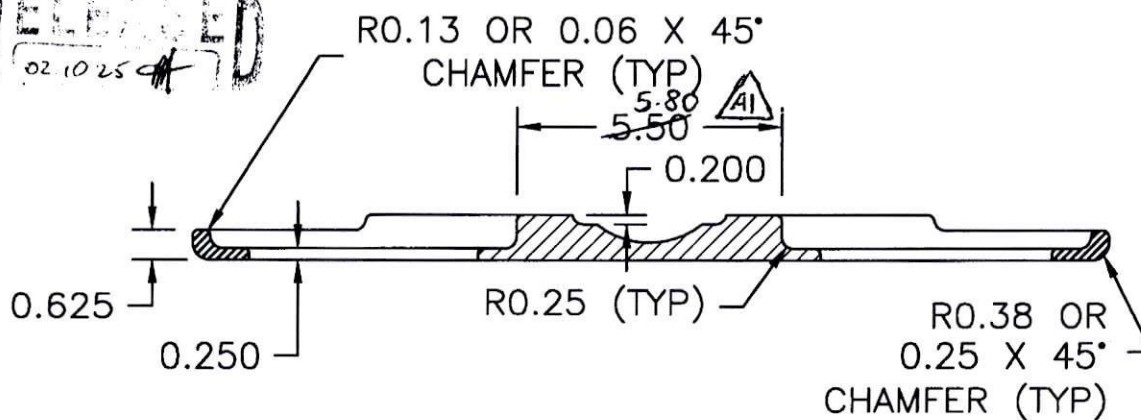
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

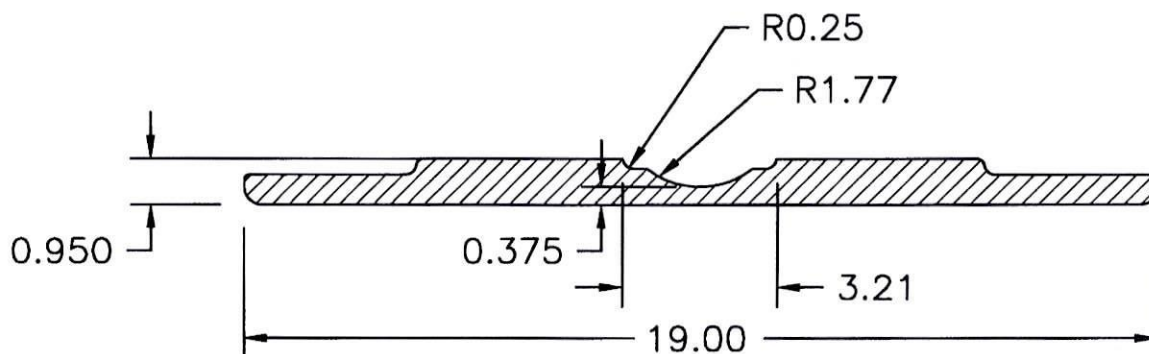


DESIGN 	DRAWN BY 	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED 	APPROVED 	DRAWING NO. D3167	REV. A SHEET 2 OF 2
DATE 02.10.08		TITLE BEARPAW	SCALE 1:4

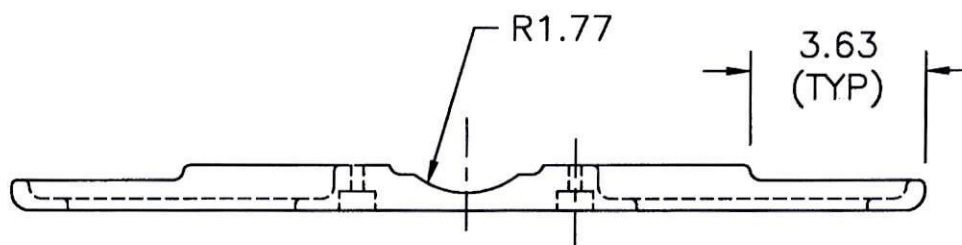
RELEASED
02.10.25



SECTION A-A



SECTION B-B



SECTION C-C

Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____ Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS					
	Rework ☐	Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐		
	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐		
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐		
	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐			

Date :	Step #:	QTY Effective :	MRB (QS1042) Approval
Description Work Order Deviation		Disposition	Completed By
			Lead hand / Supervisor Approval Verification
			QC / QA Coordinator Approval

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :					
Misidentified ☐	Past Due ☐						